

**ABSTRACT OF THE DISCLOSURE**

5 A system and method of powering a fiber optic communication network are provided which transmits communication data between a telephone company central office and remote user device. The system includes a power source configured to provide an electrical supply voltage to a digital subscriber line access multiplexer. The power source having an AC power feed for providing power to the digital subscriber line access multiplexer and a DC power feed for providing power to the digital subscriber line access multiplexer when the AC power feed is not supplying power. Further, an electrical conducting medium configured to conduct the electrical supply voltage and the communication data from the digital subscriber line access multiplexer to the remote user device is provided. Therefore, the present invention provides a system and method for reliably powering a fiber optic communication network with AC power under normal operating conditions and DC backup power when the AC power is interrupted, thus providing lifeline telephony service while, reducing maintenance costs by having a limited number of centralized remote power sites.

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